

S/089/61/010/002/014/018
B102/B209

On the problem of ...

with 100r/min is used as a gamma source; 2) temperature is kept constant at 20°C, 3) transmissivity is measured only 10 min after irradiation; 4) use of samples of equal thickness (1 mm), and 5) use of a monochromatic light source (3500 Å) in the transmissivity measurements. These conditions exclude effects of experimental arrangement and warrant reproducibility. For a perfect quantitative characteristic of the radiation effect, the introduction of one more important constant characterizing the stability of the arising color centers, is necessary. The destruction of the color centers (termed "fading") may be described by the empirical formula $\mu_\tau = \mu_T K_c / (K_c + \log \frac{I}{I_0})$. μ_T denotes the light transmissivity as measured one hour after irradiation; μ_τ stands for the same coefficient, but as measured τ hours after the irradiation ($\tau < \tau_c$), K_c is a constant. The stability of the color centers may be characterized by K_c , but just as well by the time τ_c (in hours) after which 25% of the formed color centers are destructed again. All these coefficients were measured for several glass types, and the following was obtained:

Card 2/3

G/025/62/000/008/004/005
I041/I241

AUTHOR: Spurny, Z.

TITLE: A thermo-luminescent dosimeter

PERIODICAL: Kernenergie, no.8, 1962, 611-615

TEXT: A dosimeter based on the thermoluminescence of manganese-activated CaSO_4 , is described. Crystals of 2-5 mm diameter prepared from anhydrous gypsum in a NaCl melt containing manganese sulfate and placed in the dosimeter consisting of a 3 mm glass tube 20 mm long, and shielded to exclude radiation of less than 0.2 MeV. The glow curve of the material was found to have a maximum at 82°C; causing easy excitability together with some fading of the energized crystals. An apparatus consisting of an oven and a suitable photomultiplier integrating circuit is described in detail. The γ dose measurements between 10-1000 r were reproducible to $\pm 10\%$. No direct

Card 1/2

G/025/62/000/008/004/005
I041/I241

A thermo-luminescent dosimeter

response to neutrons was found indicating that the dosimeter is suitable for γ measurements in thermal columns. The fading of the excitation, while it somewhat limits the use for laboratory dosimetry, is of advantage in the case of accident dosimetry because the pre-accident accumulated dose or remains low. There are 11 figures.

ASSOCIATION: Dosimetrische Abteilung des Instituts für Kernforschung
(Department for Dosimetry, Institute for Nuclear
Research Prague)

SUBMITTED: January 18, 1962

Card 2/2

Z/008/62/000/012/001/002
E071/E492

AUTHOR: Spurný, Zdeněk

TITLE: Radiation in chemical syntheses

PERIODICAL: Chemické listy, no.12, 1962, 1393-1402

TEXT: The article reviews applications of radiation to the syntheses and modification of polymeric materials and outlines possible developments including: production of nitric acid, production of ethylene glycol from methanol, hexachloroethane from tetrachloromethane, diphenyl from benzene, acetaldehyde, acetyl acetone and diacetyl from acetone, phenol from aq. emulsions of benzene, 1,2-diphenyl ethane from aq. emulsions of toluene, 2,2'-diphenyl-diphenyl from aq. emulsions of diphenyl, formic acid from mixtures of oxygen and methane, aniline from ammonia and benzene, benzyl chloride from tetrachloromethane and benzene, indophenol from α -naphthol and phenylene diamine, methyl-propyl ketone from propylene and acetaldehyde. The author stresses the speculative character of his paper and abstains from submitting yields or discussing the scaling-up procedures to meet the industrial requirements. There are 2 tables.

Card 1/2

Radiation in chemical syntheses

Z/008/62/000/012/001/002
E071/E492

ASSOCIATION: Ústav jaderného výzkumu ČSAV, Praha
(Nuclear Research Institute, Czechoslovak Academy
of Sciences, Prague)

✓

Card 2/2

SPURNY, Zd.

"Selected topics in radiation dosimetry". Reviewed by Zd. Spurny.
Jaderna energie 8 no.1:36 Ja '62.

SPURNY, Z.; TEPLY, J.

Second national conference on radiation chemistry in Prague.
Jaderna energie 8 no.2:71 F '62

SPURNY, Zd.

The 2nd National Conference on Protection against radiation.
Jaderna energie 8 no.3:107 Mr '62.

SPURNY, Zd.

"The radiation chemistry of water and aqueous solutions" by
A.O.Allen. Reviewed by Zd.Spurny. Jaderna energie 8 no.12:452
'62.

CZECHOSLOVAKIA

SEKIDIA, R; SPURNY, Z; MARTIN, A.

Institute of Physical Chemistry and Institute of Nuclear
Research of the Czechoslovak Academy of Sciences, Prague

Prague, Collection of Czechoslovak Chemical Communications,
No 6, 1963, pp 1491-1495

"Effect of the Ions Intensity on the Rate of Radio-Oxidation
of Cysteine in Aqueous Solutions."

"Radiation protection in practice". Vol.1. "Principles" by W.Jacobi.
Vol.2: "Measurement technique" by M. Oberhofer. Reviewed by Z. Spurny.
Jaderna energie 9 no.3:106 Mr '63.

SPURNY, Z.

"Radiation and health" by K. Williams, C.L. Smith and H.D.
Chalke. Reviewed by Z. Spurny. Chem listy 57 no.1:79-80 Ja
'63.

SPURNY, ZDENEK

A radiothermoluminescent dosimeter. Pt.2. Jaderna energie 10 no.7:
246-251 JI'64

1. Department of Radiological Dosimetry, Institute of Nuclear
Research, Czechoslovak Academy of Sciences, Prague.

FOJTIK, A.; SPURNY, Z.; BRDICKA, R.

New approach to the preparation of ^{35}S -labelled cystine. Coll
Cz Chem 30 no.3:892-893 Mr '65.

1. Institute of Physical Chemistry and Institute of Nuclear
Research of the Czechoslovak Academy of Sciences, Prague.
Submitted July 16, 1964.

CZECHOSLOVAKIA

SPURNY, Z; SPURNY, F

1. Institute of Nuclear Research, Czechoslovak Academy of Sciences, Rez near Prague, (for ?). 2: Institute of Dosimetry and Application of Ionizing Radiation, Institute of Technology, Prague - (for ?)

Prague, Collection of Czechoslovak Chemical Communications,
No 9, September 1966, pp 3702-3709

"Radioluminescence in a mixture of benzene and methyl alcohol."

L 01936-67

ACC NR: AP6030913

SOURCE CODE: UR/0018/66/000/009/0023/0023

AUTHOR: Golofast, G. (Brigadier general); Sayko, V. (Colonel);
Timoshenko, A. (Colonel); Spuskanyuk, G. (Colonel); Poletayev, A.
(Lieutenant colonel)

ORG: none

TITLE: Motorized rifle battalion in defensive operations

SOURCE: Voyennyy vestnik, no. 9, 1966, 23 and pages 26-37

TOPIC TAGS: military operation, ground force tactic, artillery
weapon, military tank, military training

ABSTRACT: The authors discuss the defensive capability of a motorized rifle battalion in modern warfare. The plan of organization for defense is analyzed under conditions of direct contact with the enemy. Problems are discussed concerning the engineering support of the battalion defense area and the military operations for repelling the attacks of military tanks and infantry subunits. The duties of the battalion commander, battalion commanding personnel, and artillery battalion commander are analyzed in detail for a concrete tactical plan. Orig. art. has: 2 figures and 1 table. [NT]

SUB CODE: 15/ SUBM DATE: none/

Card 1/1 hs

DIBAK, O.; BROZMAN, B.; KOTULIAK, V.; KORTUS, J.; NEMEC, R.; Technicka spolu-
praca SPUSTOVA, D.; CHOBOTOVA, M.

Conditioned reflex changes in the glycide metabolism in hypotension
of short duration. Bratisl. lek. listy 42 no.10:594-602 '62.

1. Z fyziologickeho oddelenia Ustavu pre vyskum vyzivy ludu v
Bratislave, riaditel MUDr. A. Bucko, C. Sc., a z Fyziologickeho ustavu
Lek. fak. Univ. Komenskeho v Bratislave, veduci clen koresp. Slovensky
akademie vied J. Antal, Dr.Sc.

(REFLEX CONDITIONED) (CARBOHYDRATES metab)
(ATMOSPHERIC PRESSURE)

DIBAK, O.; BUCKO, A.; KORTUS, J.; KOTULIAK, V.; technicka spoluprac: SPUSTOVA, D.; CHOBOTOVA, M.; BABUSIK, I.

Protective diets and metabolism of some elements in subjects exposed to fluorine ions. Bratisl. Lek. Listy 43 no.2:77-88 '62.

1. Z Ustavu pre vyskum vyzivy l'udu v Bratislave, riaditel' MUDr.

A. Bucko, C. Sc.

(FLUORINE toxicol) (ALUMINUM metab)
(CALCIUM metab) (PHOSPHORUS metab) (DIETS)

KORTUS, J.; DIBAK, O.; KOTULIAK, V.; Technicka spolupraca:
SPUSTOVA, D.; CHOBOTOVA, M.; BABUSIK, I.

Effect of various nutritional factors and fluorine ions on
aluminum retention in bony tissue of rats. Cesk. gastroent.
vyz. 17 no.4:202-212 Je '63.

1. Fyziologicke oddelenie Ustavu pre vyskum vyzivy ludu v
Bratislave, riaditel MUDr. A. Bucko, CSc.
(DIET) (BONE AND BONES) (ALUMINUM)
(FLUORINE) (VITAMIN D)

SPUTNOVA, I.A.; BELYAYEV, A.I.

Low-temperature caking of nephelines with caustic ~~alkalis~~. Izv. vys.
ucheb. zav.; tsvet. met. 5 no.5:93-99 '62. (MIRA 15:10)

1. Moskovskiy institut stali, kafedra chistykh metallov i poluprovod-
nikovyykh materialov.
(Nepheline) (Hydrometallurgy)

L 16459-66

ACC NR: AP6009074

SOURCE CODE: UR/0105/65/000/004/0014/0019

AUTHOR: Dmokhovskaya, L. F. (Candidate of technical sciences); Dzhunkovskiy, O. N. (Engineer); Lyskov, Yu. I. (Engineer); Nebrat, L. E. (Engineer); Spuv, G. S. (Engineer); Shur, Yu. B. (Engineer); Yakub, Yu. A. (Engineer) 24

ORG: none B

TITLE: Development and introduction of spark connection and forcing of reactors in long distance electrical transmission 4

SOURCE: Elektrichestvo, no. 4, 1965, 14-19

TOPIC TAGS: electric power transmission, electric distribution equipment, high voltage line

ABSTRACT: The introduction of high voltage, high power electric power transmission was greatly aided by the switch from limiting power to suit the capacity of insulation and transmission structures under all possible conditions to the limitation of loads to suit the capacities under normal conditions and the installation of reactors and circuit breakers to prevent sudden overloads. One remaining problem was the slow action of mechanical switching devices. This has been defeated by the installation of spark gaps. The reactors are constantly connected to the line through spark gaps, across which a spark arcs almost instantaneously in case of overload. A 500 kv transmission line was

Card 1/2

UDC: 621.311.1 2

L 16459-66
ACC NR: AP6009074

set up between the Bratsk power station and Irkutsk and tests and analysis of the operation of the equipment described were run. It was discovered that overloads occurred mostly in the second or third half-cycle of operation. It was also discovered that it is profitable to install spark-operated reactors at substations, even at terminal stations in many cases. Diagrams and photographs of the equipment, as well as a table showing the results of investigations on a model of internal overloads and the influence on them of various means of connection of the 500 kv reactors, are presented. Analysis showed that the devices worked reliably and safely, and that the internal resistance of the spark in the gap could be ignored. Orig. art. has: 4 figures and 1 table. [JPRS]

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 007 / OTH REF: 001

Card 2/2 mc

KRAYZ, A.G., inzh.; LEYTES, L.V., inzh; SPUV, G.S., inzh.

Study of multiframe magnetic circuits of power transformers. Vest.
elektroprom. 32 no.3:5-9 Mr '61. (MIRA 15:6)
(Electric transformers) (Magnetic circuits)

DMOKHOVSKAYA, L.F., kand. tekhn. nauk; DEHUNKOVSKIY, O.N., inzh.;
LYSKOV, Yu.I.; NEBRAT, L.Ye.; SPUV, G.S.; SHUR, Yu.B.;
YAKUB, Yu.A.

Development and use of spark gap connections and forcing of
reactors in long-distance power transmission systems. Elektri-
chestvo no.4:14-19 Ap '65. (MIRA 18:5)

SIDORENKO, L.P., inzh.; SPUV, G.S., inzh.; YAKUB, Yu.A., inzh.

Use of shunting reactors for taking power from 400 kv. electric
power transmission lines. Elek. sta. 32 no.2:48-50 P '61.
(MIRA 16:7)

(Electric power distribution)

SPUZIC, V.; PANDIC, S.; SPUZIC, I.; DRDEVIC, S.; NOVOVIC, M.; JANCIC, Marija

Air pollution as an etiologic factor in asthma in the Bor mining
area. Glas. Srpska akad. nauk [Med.] 17 no.257:35-38 '64.

MOJOVIC, Mihajlo; SPUZIC, Ivan

Sensitization of organism to bacteria. Srpski arh. celok. lek.
85 no.3:293-298 Mar 57.

1. Fizioloski institut Medicinskog fakulteta u Beogradu.
Upravnik: prof. dr. Milutin Neskovic. Odeljenje za eksperimentalnu
i klinicku patologiju Instituta za medicinska istrazivanja Srpske
akademije nauka. Upravnik; prof. dr. Vojislav Arnovljjevic.

(ALLERGY, etiol. & pathogen.
to bact. (Ser))

DANILOVIC, Vojislav, Prof. Dr.; SPUZIC, Ivan, Dr.

Modern therapy of allergic diseases. Med. glasn. 13 no.3:89-92 Mar 59.

1. Interna klinika B Medicinskog fakulteta u Beogradu (Upravnik: prof. dr R. Berovic).

(ALLERGY, therapy,
(Ser))

DANILOVIĆ, V.; KARAJOVIĆ, D.; LJALJEVIĆ, M.; POPOVIĆ, D.; SPUZIC, I.:

Diagnosis of allergy among bakers and millers. Acta med. iugosl.
13 no.3:294-300 '59.

1. Centre clinique pour les maladies professionnelles, Faculte de
Medecine de Belgrade.

(ALLERGY etiol.)

(FLOUR)

(OCCUPATIONAL DISEASES etiol.)

DURICIC, I.; SAVIC, V.; SPUZIC, I.; SAVIC, V.

Role of histamine in anaphylactic shock in dogs. Acta med. iugosl.
13 no.3:399-406 '59.

1. Section de la medecine de travail de l'Institut de recherches
medicales de l'Academie Serbe des Sciences, Belgrade.

(ALLERGY exper.)

(HISTAMINE physiol.)

SPUZIC, I., dr., asistent; ROLOVIC, Z., dr.

Antigenic properties of human plasma. Glas SANU 12
no.2:225 '60 [publ.'62].

*

NEDELJKOVIC, Srecko, dr; JOSIPOVIC, Vladan, doc., dr; DURIC, Vukosava, dr;
SPUZIC, Ivan, dr; PETRASKOVIC, Dragoslav, dr; VUJIC, Ljubica, dr

Myocardial infarct in subjects under 40 years of age. Med. glas. 15
no.3:139-144 Mr '61.

1. Interna klinika B. Medicinskog fakulteta u Beogradu (Upravnik: prof.
dr R. Berovic) I Dom narodnog zdravlja u Beogradu (Upravnik: dr
S. Jancic) Opsta bolnica u Bihacu (Upravnik: dr M. Tatlic)

(MYOCARDIAL INFARCT case reports)

SPUZIC, I.; LJALJEVIC, M.

The blood histamine in acute allergic conditions. Acta med. iugosl.
16 no.2:243-246 '62.

1. Institut za medicinska istrazivanja u Beogradu.
(HISTAMINE) (ALLERGY)

SPUZIC, V.; ZIVKOVIC, M.; SPUZIC, I. VERBIC, Natalija; STEVAOTIC, M.;
GLUMAC, M.

Role of some allergenic factors in the appearance of asthma and
allergic manifestations. Glas. Srpska akad. nauk [Med.] 17 no.
257:119-126 '64.

ANDRIYANOV, V.; SPALIN, I.

Electrocardiogram: changes in anaphylactic reactions and under the influence of chemical mediators. Contribution to the study of the pathogenesis of anaphylactic reaction. Glas. Srpska akad. nauk [Med.] 17 no.237:235-244 '64.

SPUZIC, V.; DOZOVIC, B.; DANILOVIC, V.

Yugoslavia (430)

Science

Manifestation of allergy among workers of the silk factory in Novi Sad, Voivodina. p. 43, Zbornik Radova, Vol. 20, no. 1, 1952.

East European Accessions List, Library of Congress, Vol. 2, No. 4, April 1953. UNCLASSIFIED.

SPUZIC, Vladimir, prof. dr.

Clinical confirmation of the recent views on allergy. Med. pregl.,
Novi Sad 7 no.3:186-181 1954.

1. Ambulanta za lergijske bolesti III Interne klinike Med. fakulteta,
Beograd; Institut za fiziologiju rada Srpske Akademije Nauka.
(ALLERGY, etiol. & pathogen.)

SPUZIC, Vladimir, Prof., dr.

Effect of working conditions in various industries on
allergic diseases. Glasn. hig. inst., Beogr. 4 no.3-4:
31-40 July-Dec 1955.

(ALLERGY,
in indust., eff. of working conditions (Ser))
(INDUSTRIAL HYGIENE,
eff. of working conditions on allergy (Ser))

SPUZIC, V., Prof., dr.; LICHT, A., dr.; VUKOBRATOVIC, S., dr., (Beograd)

Relation between dwellings and allergic manifestations.
Higijena, Beogr. 7 no.1-4:425-432 1955.

(ALLERGY, etiol. & pathogen.

dust & humidity of dwellings (Ser))

(HOUSING

dusty & humid dwellings causing allergy (Ser))

SPUZIC, V.; IVANOVIC, K.

The relation between allergy and age. Med. pregl., Novi Sad
8 no.4:204-209 1955.

1. Ambulanta za alergijske bolesti III Interne Klinike Medicinskog
fakulteta Beograd. Upravnik: prof. dr. A. Dadosavljevic.
Dermatoveneroloska klinika Medicinskog fakulteta Beograd. Upravnik:
prof. dr. S. Ilic.

(ALLERGY,

relation to age. (Ser))

(AGE

relation to allergy (Ser))

TODOROVIC, Kosta; SPUZIC, Vladimir

Akademik, prof. Dr. Aleksandar Radosavljevic; 1877-1956.
Srpski arh. celok. lek. 84 no.3:416-420 March 56.

(OBITUARIES,
Radosavljevic, Aleksandar (Ser))

SPUZIC, Vladimir; PUJEVIC, Stevan

Value of high altitude climate in treatment of bronchial asthma.
Srpski arh. celok. lek. 84 no.10:1109-1116 Oct 56.

(ASTHMA, ther.
high-altitude climate ther. (Ser))
(ALTITUDE, ther. use
asthma (Ser))

SPUZIC, V.; BATA, A.; CVETOJEVIC, M.

Reactions of the pleura and of the peritoneum of sensitized guinea-pigs to repeated applications of horse serum. I. Glas Srpske akad. nauka, odelj. med.. 217 no.10:65-78 1956.

1. Rad sa Patoloskog instituta i Instituta za patolsku fiziologiju Medicinskog fakulteta u Beogradu.

(IMMUNE SERUMS, effects,

horse serum on pleura & peritoneum of sensitized guinea pigs (Ser))

(PLEURA, effect of drugs on,

horse serum in sensitized guinea pigs (Ser))

(PERITONEUM, effect of drugs on,
same)

SPUZIC, V.; BATA, M.; CVETOJEVIC, M.

Reaction of the pleura and of the peritoneum of sensitized guinea pigs to repeated application of horse serum. II. Glas Srpske akad. nauka, odelj. med. 217 no.10:85-104 1956.

(IMMUNE SERUMS, effects,

horse serum on pleura & peritoneum of sensitized guinea pigs (Ser))

(PLEURA, effect of drugs on,

horse serum of sensitized guinea pigs (Ser))

(PERITONEUM, effect of drugs on,
same)

SPUZIC,V.; RAMZIN,S.; DORDEVIC,S.; KRSTIC,A.

Relationship between asthma and urbanism. Acta med. iugosl. 13
no.3:281-286 '59.

1. Institut de recherches medicales de l'Academie Serbe des Sciences
et Institut d'Hygiene de la R.P. de Serbie, Belgrade.
(ASTHMA etiol.)
(AIR POLLUTION eff. inj.)

SPUZIC, V.; SLAVKOVIC, V.; PAVLOVIC, V.; KENTERA, D.; DEVEČERSKI, M.

Current status of allergy among inhabitants of the village Lazaropolje
(Macedonia). Glas. srpske akad. nauk. [Med] no.15:1-4 '60.

(ALLERGY epidemiol)

S

SPUZIC, V.

Effect of estradiol on the modification of reactions to specific per-
ceptive phenomena in chicks. Glas. srpske akad. nauk. [Med] no.15:
89-93 '60.

(ESTRADIOL pharmacol)

S

SPUZIC, V.; SLAVKOVIC, V.; ZIVKOVIC, M.; DAVIDOVIC-MILOVANOV, D.; MOJOVIC, M.

Role of hereditary predisposition in the appearance of asthma in
asthmogenic zones. Glas. srpske akad. nauk. [Med] no.15:101-105 '60.

(ASTHMA genetics)

SPUZIC, V.

The 3d International Conference on Allergy; Bordighera (Italy)
and Grasse (France), October 24-28, 1960. Glas SANU 12
no.2:268-269 '60 'publ.'62].

1. Dopisni clan Srpske akademije nauka i umetnosti, Beograd.

SPUZIC, V.; ZIVKOVIC, M.; VERBIC, N.; CIRIC, O.; ZIVKOVIC, M.

Current status of allergy in Ohrid inhabitants. Glas. srpske akad.
nauk.[Med] no.15:5-8 '60.

(ALLERGY epidemiol)

SPUZIC, V.; IVKOVIC, L.; VUKOBRATOVIC, S.; TESIC, S.

Asthmogenic regions in Yugoslavia. Glas. srpske akad. nauk. [Med] no.15:
19-31 '60.

(ASTHMA epidemiol)

S

SPUZIC, V.; BOJANIC, M.

Role of climate in allergic manifestations. Glas. Srpske akad.
nauka, odelj. med. 248 no.16:83-102 '61.

(ALLERGY) (CLIMATE)

5

SPUZIC, V.; LJALJEVIC, M.; TOPEGDEIC-LJALJEVIC, J.; VERBIC, Natalija;
CIRIC, Olivera; DAMJANOVIC, V.

Unfavorable effects of local factors in the appearance of allergic
manifestations. Glas. Srpska akad. nauk [Med] 17 no.257:1-5 '64.

SPUZIC, V.; PERESIC, S.; SPUZIC, I.; BORDEVIC, S.; MOJOVIC, M.; JANCIC, Marija

Air pollution as an etiologic factor in asthma in the Bor mining
area. Glas. Srpska akad. nauk [Med.] 17 no.257:35-38 '64.

SEVIZIC, V.; ZIVKOVIC, M.; S. UZIC, I. VERBIC, Natalija; STEVANOVIC, M.;
GLUMAC, M.

Role of some allergenic factors in the appearance of asthma and
allergic manifestations. Glas. Srpska akad. nauk [Med.] 17 no.
257:119-126 '64.

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SPINZIC, V.; VERBIC, M. 11/1

Role of heredity in branching out. Glas. Srpska akad. nauk
[Ser.] 17 no.257:175-18. '64.

V. 11. 11. 11.
MEISLOWA, P.; RYZEWSKA, A.; SPVZYNSKA, L.

Studying the effect of a triple compound vaccine against typhoid fever, tetanus and diphtheria. Zhur. mikrobiol. epid. i immun
28 no.2:148-149 F '57 (MLRA 10:4)

(TYPHOID FEVER--PREVENTIVE INOCULATION)

(TETANUS--PREVENTIVE INOCULATION)

(DIPHTHERIA--PREVENTIVE INOCULATION)

SPYCHAL, A.

The crease resistant finish of linen clothing textiles. p. 147.

PRZEGLAD WLOKIENNICZY. (Stowaryszenie Inzynierow i Technikow Przemyslu Wlokienniczego Lodz, Poland, Vol. 13, No. 3, Mar. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 9, No. 2, Feb. 1959.

Uncl.

SPYNU, A.V.

Circulating blood volume during chronic suppurative processes
in the lungs. Zdravookhranenie 6 no.3:27-29 My-Je'63
(MIRA 16:11)

1. Iz kliniki fakul'tetskoy khirurgii (zav.-dotsent N.Kh.
Anestiyadi) Kishinevskogo meditsinskogo instituta.

*

SPYNU, G.A.

✓ Laboratory apparatus for growing and alloying of germanium monocrystals. P. B. Mertens, E. G. Miskin, G. P. Ryabchuk, and G. A. Sprau. *Priroda* 1957, No. 4, 20-7. — The authors describe an app. permitting the growth of germanium monocrystals by pulling them from the melt with built-in controls for the speed of pulling crystals, the rotation of crucible and crystal, and temp. conditions. Simultaneous introduction of different admixts. at any stage of crystn. is possible. The essential parts of the app. are enclosed in a glass vacuum compartment connected to an oil-diffusion pump. The melting pot consists of a quartz cylinder in the upper part of which room is provided for a graphite crucible which can be rotated by a quartz shaft. A thin W wire wound around the cylinder is fed a.c. through a ferroresonance stabilizer and transformer. To grow crystals of 10 and 300 g., 100 and 800 w. are required. Operating conditions are: pressure $1-2 \times 10^{-4}$ mm. Hg, temp. about 20° above the m.p. of germanium. To grow a 100-g. crystal the app. requires 1.5-2.0 hrs. at a pulling speed of 0.8-1.0 mm./min. B. Kravits

SPYNU, Gleb Aleksandrovich; OVOSHCHNIKOV, M.S., inzhener, retsengent; LEUTA, V.I., inzhener, redaktor; RUDNENSKIY, Ya.V., tekhnicheskii redaktor.

[Vacuum sealing] Vakuunnye uplotneniia. Kiev, Gos. nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1956.63 p. (MLRA 9:5)
(Vacuum apparatus)

SOV/120-53-4-30/30

AUTHOR: Spynu, G. A.

TITLE: Author's Reply to the Review of the Book "Vacuum Seals", Mashgiz - Kiev, 1956 (Pribory i tekhnika eksperimenta, Nr 4, 1957) (Otvet avtora na retsenziyu knigi "Vakuumnyye Uplotneniya", Mashgiz - Kiyev, 1956 g. (PTE, No 4, 1957))

PERIODICAL: Pribory i tekhnika eksperimenta, 1958, Nr 4, pp 109-110 (USSR)

ABSTRACT: The author, G. A. Spynu, replies to an unfavourable review of his book. In an editorial note the editors point out that the initial pressures for diffusion pumps given in this book are incorrect.

Card 1/1

SPYNU, G. A.

"Use of tape recording."

Programmed Control of Metal Cutting Machines. report presented at
All-Union Conference, Moscow, 13-16 Nov 1957
Vestnik Ak. Nauk SSSR, 1958, No. 2, pp. 113-115, (author Kobrinskiy, A. Ye.)

SPYNU, G.A.; KOBUS, Yu.I.; GIZILA, V.Ye.; APANAS'YEV, V.N.

Program control system of the 1341P turret lathe. Avtom.i prib.
no.1:29-35 '59. (MIRA 13:10)

(Lathes--Numerical control)

SPYNU, G.A.; PORITSKIY, O.V.

Shift pickup called "magnetic stops." Avtom.i prib. no.1:35-39
'59. (MIRA 13:10)

(Magnetic instruments)

SPYNU, G. A. Cand Tech Sci -- (diss) "Automatic Control of Machine Tools by Means of Magnetic Recording." Kiev, 1957. 13 pp 22 cm. (Min of Higher Education ~~U~~r Ukrainian SSR, Kiev Order of Lenin Polytechnic Inst), 100 copies (KL, 17-57, 97)

- VI. "Systems of Automatic Control. 1. Electropneumatic system of automatic control.
2. System of program control of automatic machines using a magnetic recording,"
Automation and Mechanization of Production Processes in Instrument Manufacturing,
Moscow, Mashgiz, 1958. 591. p.

PURPOSE: This book is intended for engineers, technicians, and scientific personnel concerned with mechanization and automation of production processes in instrument manufacturing, and for students and teachers of this subject in vuzes.

KUKHTENKO, A.I., doktor tekhn.nauk; SPYNU, G.A., kand.tekhn.nauk

The Second International Congress on Automatic Control.
Avtom. i prib. no. 1:79-80 Ja-Mr '64. (MIRA 17:5)

SPYNU, G.A., kand.tekhn.nauk; GIZIJA, V.Ye.

The "Avangard" program controlled machine for cutting and laying-out
metals. Biul.tekh.~~ek~~on.inform.Gos.nauch.-issl.inst.nauch. i tekhn.
inform. no.8:24-26 '62. (MIRA 15:7)
(Machine tools—Numerical control)

SRIBNER, Leonid Andreyevich; SHRAGO, Leonid Konstantinovich; SFYRU, G.A.,
kand. tekhn. nauk, retsenzent; BYKOVSKIY, A.I., inzh., red.;
GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

[Design of position-type program control systems] Proektirovanie
pozitsionnykh sistem programmogo upravleniia. Moskva, Mashgiz,
1962. 307 p. (MIRA 15:5)

(Automatic control)

(Milling machines--Numerical control)

SPYNU, G.A., kand. tekhn. nauk

Using electronic digital computers in designing technological
processes. Avt. i prib. no.4s14-17 O-D '64 (MIRA 18:2)

SPYNU, G.A.

Mechanization and automation of the engineering and management
work in industry. Avt. 1 prib. no.4:80 O-D '64 (MIRA 18:2)

L 27887-65 EWP(1) GS

ACCESSION NR: AT5003952

S/0000/64/000/000/0286/0298

10
B+L

AUTHOR: Malinovskiy, B. N.; Shurikhin, V. I.; Spymu, G. A.

TITLE: Digital method in the technology of design and manufacture of ship's hull parts

SOURCE: Nauchno-tehnicheskoye obshchestvo priborostroitel'noy promyshlennosti. Nauchno-tehnicheskoye soveshchaniye. 3d, Moscow, 1962. Vychislitel'naya tekhnika dlya avtomatizatsii proizvodstva (Computer technology for the automation of production); trudy soveshchaniya. Moscow, Izd-vo Mashinostroyeniye, 1964, 286-298

TOPIC TAGS: program control, control computer, production planning, shipbuilding

ABSTRACT: The article describes a digital-computer-controlled automatic steel-plate acetylene cutter for shipbuilding use, intended for automatization of laying out and cutting flat sheets of irregular shape. The heart of the control system is the transistorized UMSHn (general purpose control computer) developed by Vychislitel'nyy tsentr (Computation Center) AN UkrSSR. The program is recorded on 7 tracks of standard 35-mm perforated magnetic tape. The cutter motion program is

Card 1/2

Card 2/2

SHAKHBAZYAN, G.Kh.;SPYNU, Ye.I.

Apparatus for the study of dust toxicity on animals. Gig. sanit., Moskva
no.6:26-30 June 1953. (GIML 25:1)

1. Of Kiev Institute of Labor Hygiene and Occupational Diseases.

SPYNU, Ye. I.

SPYNU, Ye. I. -- "Data on the toxicology of the insecticide MIUIF-100 and its Hygienic Standardization." Cand Med Sci, Acad Med Sci USSR, 20 Jan 54. (Vechernyaya Moskva, 8 Jan 54)

SO: SUM 168, 22 July 1954

SP. 10, Ye. I.

U S S R .

Prophylaxis of poisoning in work with Thiotos (para-
thion) in agriculture. E. I. Spynin (Inst. Ind. Hyg. and
Occupational Diseases, ~~USSR~~ *Sankh.* 1954, No. 6,
38-40). The following suggestions are made for workers
with parathion in agriculture: reduce contact with the in-
secticide by a 4-hr. working day, apply only during morning
and evening hrs. (lower temp.), and observe wind direction.
The equipment is decontaminated with 5% NaOH as well
as lime and 10% Na₂CO₃. For first aid, after stomach ir-
rigation with much H₂O to cause vomiting, administer ac-
tivated C followed by a laxative. Min. mortal concn. is
estd. at 15-20 mg./cu.m. Severe poisoning is caused by
0.4-1.0 ml./kg. dosage. G. M. Kosolapoff

SPYNU, Ye. I. (Kiev Inst. of Labor Hygiene and Occup. Diseases)

"Action of Some Organophosphorus Insecticides on Higher Nervous Activity and Activity of Cholinesterase" (Deystviye nekotorykh fosfororganicheskikh insektitsidov na bysshuyu nervnuyu deyatel'nost' i aktivnost' kholinesterazy)

Chemistry and Uses of Organophosphorous Compounds
(Khimiya i primeneniye fosfororganicheskikh soedneniy),
Trudy of First Conference, 8-10 December 1955, Kazan,
PP. Published by Kazan Affil. AS USSR, 1957
336-343

Report discussed by M. Ya. Mikhel'son (1st Leningrad Med. Inst. im. I. P. Pavlov),
Z. m. Malkin (Kazan State Med. Inst.), V. A. Bondarin (Minsk State Med. Inst.)
with closing word by author.

С. П. Я. И. Е. И.

"Experimental Data on the Reflex Mechanism of the Action of Mercuric and Organophosphorus Insectofungicides," by L. I. Medved', Yu. S. Kagan, and Ye. I. Spynu, VIII Vsesoyuznyy S'yezd Fiziologov, Biokhimikov, Farmakolov (VIII All-Union Session of Physiologists, Biochemists, and Pharmacologists) Moscow, 1955, 408-410 (from Sovetskoye Meditsinskoye Referativnoye Obozreniye, Normal'naya i Patologicheskaya Fiziologiya, Biokhimiya, Farmakologiya i Toksikologiya, No 27, 1956, abstract by F. Meyerson, pp 126-127)

"Experiments in which the conditioned reflex method was utilized established that the administration of toxic doses of thiophos and carbophos to animals produced an inhibitory reaction of the higher branches of the nervous system marked by a prolongation of the latent period of conditioned reflexes and the time necessary for their transmission, phase manifestations, their extinction, an absence of the natural conditioned reflex to food, and a diminution of the orientation reflex. These disturbances, which are reversible in character, may be regarded as being in the nature of a protective-defensive inhibition. This is confirmed by the positive results which are obtained with the use of soporific substances in the therapy of intoxications in animals by thiophos.

SYM. 1377

CPY 114, Y.E. I.

"The inhibition of the activity of cholinesterase and the accumulation of acetylcholine play an important role in the mechanism of the toxic action of organophosphorus compounds. The changes which take place in conditioned reflex activity and in the activity of the serum cholinesterase are parallel and form the early symptoms of intoxication. The authors concluded that the mercuric and organophosphorus compounds, being enzymic poisons with selective action on the thiol enzymes and cholinesterase, respectively, even in small doses cause changes in the functional condition of the nervous system. In a number of cases it was possible to establish a definite dependence of the changes in the nervous system on the degree of depression of the enzymic systems. (U)

54M.1377

SPYNU, Ye.I.; OSETROV, V.I.

Experimental data on the toxicology of chlorphene and heptachlor.
Nauch.trudy Inst.ent.i fit. AN URSS 7:63-67 '56. (MLRA 10:3)

(Heptachlor) (Toxaphene)

SPYNU, Ye.I.

V-8

USSR/Pharmacology, Toxicology. Toxicology

Abs Jour : Ref Zhur - Biol., No 5, 1958, No 23494

Author : SPYNU, Ye.I.

Inst : ~~Not given~~ Kiev Inst. Labor Hygiene + Professional Diseases

Title : Experimental Data on the Toxicology of Thiophos

Orig Pub : Farmakol. i toksikologiya, 1956, (1957) Prilozh. Sb. ref.,
49-53

Abstract : An oil suspension of thiophos (I) was introduced into the stomach of cats once in a dose of 8 to 13 mg/kg, and of mice in doses of 6 to 18 mg/kg. Mice and rats were poisoned with a 1% dust of I in a special chamber (concentration 0.015 to 0.02 mg/liter of technical I). The picture of intoxication in all cases was the same. The threshold concentration of I (0.01 ml/liter in inhalation, and 3 mg/liter when introduced into the stomach) was determined in 7 cats by food conditioned motor reflexes. The capacity of I to accumulate was determined by experiments on cats, four of which were given 1 mg/kg of I daily in food, while the remainder of the animals were administered 1% dust of I by inhalation. No local effects were

Card : 1/2

SPYNU, Ye.I.; KUNDIYEV, Yu.I.; VOYTENKO, G.A.; IVANOVA, Z.V.; LEBEDEVA, T.A.

Hygienic evaluation of working conditions when using chlorinated organic insecticides in controlling sugar beet pests. Nauch.trudy Inst.ent.i fit. AN URSR 7:58-62 '56. (MLRA 10:3)
(Spraying and dusting--Hygienic aspects) (Insecticides)
(Sugar beets--Diseases and pests)

Spynu, E. I.
USSR / General and Special Zoology. Insects. P

Abs Jour: Ref Zhur-Biol., No 3, 1958, 11728

Author : Spynu *E. I.*, Osetrov V. I.

Inst : ~~Institute~~ of Entomology and Phytopathology of the
Academy of Sciences of the Ukrainian Soviet So-
cialist Republic.

Title : Experimental Data on the Toxicology of Chlorphenol
and Heptachlore.

Orig Pub: Nauchn. tr. In-ta entomol. i phytopatol. AN USSR,
1956, 7, 63-67

Abstract: On the toxicity of chlorphenol and heptachlore
in mice, rats, rabbits and cats.

Card 1/1

MAKOVSKAYA, Ye.I., kand.med.nauk, SPYNU, Ye.I., kand.med.nauk

Morphological changes in the animal organism in aldrin and dieldrin poisoning. Vrach.delo no.5:511-514 My '58 (MIRA 11:7)

1. Kiyevskiy institut gigiyeny truda i professional'nykh sa-
bolevaniy.
(NAPHTHALENE--TOXICOLOGY)

KAGAN, Yu.S., kand. med. nauk (Kiyev); SPYNU, Ye.I., kand. med. nauk (Kiyev).

In the plenum of the committee on agricultural chemicals. Zashch.
rast. ot vred. i bol. 3 no.3:62 My-Je '58. (MIRA 11:6)
(Insecticides) (Fungicides)

36. 74. 11
BURKATSKAYA, Ye.N., kand.med.nauk (Kiyev); SPYNU, Ye.I., kand.med.nauk (Kiyev)

Before the sowing campaign. Zdorov'e 4 no.3:27 Mr '58. (MIRA 11:3)
(CHEMICALS---SAFETY MEASURES)

SPYNU, Ye. I.; OSETROV, V. I.

"On the problems of toxicology and mechanism of action of
certain new chlororganic insecticides."

report submitted at the 13th All-Union Congress of Hygienists,
Epidemiologists and Infectionists, 1959.

SPYNU, Ye. I.; MAKOVSKAYA, Ye. I.; BRAKHNOVA, I. T.; KAGAN, Yu. S.

"Experimental data on the toxicology of phosphoro-
organic insecticides."

report submitted at the 13th All-Union Congress of Hygienists,
Epidemiologists and Infectionists, 1959.

SPYNU, Ye. I.; FURKATSKAYA, Ye. N.; BRAKHNOVA, I. T.; MEDVED', L. I.;
KAGAN, Yu. S.

"Basic principles of hygienic evalation of insectofungicides."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists
and Infectionists, 1959.

MEDVED', L.I., dotsent, red.; KRIVOGLAZ, B.A., prof., red.; KAGAN, Yu.S.,
kand.med.nauk, red.; SEREBRYANAYA, S.G., dotsent, red.;
TOSTANOVSKAYA, A.A., kand.med.nauk, red.; KUNDIYEV, Yu.I., kand.
med.nauk, red.; BURKATSKAYA, Ye.N., kand.med.nauk, red.; SPYNU,
Ye.I., kand.med.nauk, red.; NOVIKOV, Yu.V., red.; BUL'DIYAYEV,
N.A., tekhn.red.

[Hygiene, toxicology, and clinical aspects of new insecticides
and fungicides] Gigiena, toksikologiya i klinika novykh insekto-
fungitsidov; trudy. Pod obshchei red. L.I.Medvedia. Moskva, Gos.
izd-vo med.lit-ry Medgiz, 1959. 370 p. (MIRA 14:1)

1. Vsesoyuznaya nauchnaya konferentsiya po gigiyene i toksikologii
insektov i fungitsidov. 1st, Kiev, 1957. 2. Kiyevskiy institut
gigiyeny truda i profzabolevaniy (for Medved', Kagan, Kundiyeu,
Spynu). 3. Ukrainskiy nauchno-issledovatel'skiy institut pitaniya
(for Tostanovskaya).
(Insecticides) (Fungicides)

SPYNU, Ye.I.

Functional state of the hypophysis-adrenal cortex system as a
criteria of action of low-intensity chemical factors. Gig.i san.
24 no.11:26-31 N '59. (MIRA 13:4)

1. Iz Kiyevskogo instituta gigiyeny truda i professional'nykh
zabolevaniy.

(PITUITARY GLAND pharmacol.)
(ADRENAL CORTEX pharmacol.)
(INSECTICIDES pharmacol.)

MEDVED', L.I., dotsent; SPZNU, Ye.I., kand.med.nauk

Experience in the unification of methods for a hygienic study of
insectofungicides. Gig. i san. 25 no. 5:29-34 Ky '60.

(MIRA 13:10)

1. Iz Kiyevskogo instituta gigiyeny truda i professional'nykh
zabolevaniy.

(INSECTICIDES) (FUNGICIDES)

SPYNU, Ye.I., kand.med.nauk; MOSKOVSKAYA, Ye.I., doktor med.nauk

Toxicological characteristics of the new insecticide allodan.
Gig.i san. 25 no.11:29-32 N '60. (MIRA 14:1)

1. Iz Kiyevskogo instituta gigiyeny truda i professional'nykh
zabolevaniy.

(INSECTICIDES)

(HEPTENE)

MEDVED', L.I., doktor med. nauk, red.; BURKATSKAYA, Ye.N., kand.med. nauk, red.; VOYTENKO, G.A., kand. med. nauk, red.; KAGAN, Yu.S., red.; KRIVOGLAZ, B.A., prof., red.; KUNDIYEV, Yu.I., kand. med. nauk, red.; MAKOVSKAYA, Ye.I., doktor med. nauk, red.; SEREBRYANAYA, S.G., dots., red.; SPYNU, Ye.I., kand. med. nauk, red.; TOSTANOVSKAYA, A.A., kand. med. nauk, red.; TROTSENKO, M.A., kand. khim. nauk, red.; NOVIKOV, Yu.V., red.; CHULKOV, I.F., tekhn. red.

[Hygiene and toxicology of new pesticides and clinical aspects of poisoning; reports of the Second All-Union Scientific Conference of the Committee for the Study and Reglementation of Poisonous Chemicals of the Main State Sanitary Inspection of the U.S.S.R.] Gigiena i toksikologiya novykh pestitsidov i klinika otravlenii; doklady 2-i Vsesoyuznoi nauchnoi konferentsii Komiteta po izucheniiu i reglamentatsii iadokhimikatov Glavnoi gosudarstvennoi sanitarnoi inspeksii SSSR. Pod obshchei red. L.I. Medvedia. Moskva, Medgiz, 1962. 478 p. (MIRA 16:4)

1. Vsesoyuznaya nauchnaya konferentsiya po gigiyene i toksikologii insektov i fungitsidov, 2d, 1962.

(Continued on next card)

MEDVED', L.I.---(continued). Card 2.

2. Predsedatel' Komiteta gosudarstvennoy sanitarnoy inspeksii SSSR po izucheniyu i reglamentatsii yadokhimikatov (for Medved'). 3. Kiyevskiy nauchno-issledovatel'skiy institut gigiyeny truda i profzabolevaniy (for Burkatskaya, Voytenko, Spynu, Kagan, Trotsenko). 4. Ukrainskiy nauchno-issledovatel'skiy institut pitaniya (for Serebryanaya).

(PESTICIDES--TOXICOLOGY)

SPYNU, Ye.I., starshiy nauchnyy sotrudnik

Toxicity of diene synthesis pesticides and safety measures
for their use. Zashch. rast. ot vred. i bol. 7 no.12:39-40
D '62. (MIRA 16:7)

1. Kiyevskiy institut gigiyeny truda i professional'nykh
zabolevaniy.

(Agricultural chemicals--Safety measures)
(Insecticides--Toxicology)

L 33106-66 EWT(1) RO
ACC NR: AP6021157

SOURCE CODE: UR/0240/66/000/003/0112/0114

AUTHOR: Spynu, Ye. I. (Kiev)

ORG: none

TITLE: Third All-Union Conference on the Hygiene and Toxicology of Pesticides and Clinical Aspects of Poisoning

SOURCE: Gigiyena i sanitariya, no. 3, 1966, 112-114

TOPIC TAGS: biologic conference, chemical conference, pesticide, toxicology, hygiene, organomercury compound, manganese compound, poison effect

ABSTRACT: The Third All-Union Conference on the Hygiene and Toxicology of Pesticides was held in Kiev in June 1965 with more than 450 scientists and practical workers in attendance. A representative list of the subjects of the papers read and the authors includes the synthesis of pesticides (N. N. Mel'nikov), DDT residues in soil, plants, and water in Uzbekistan (Kh. Z. Lyubetskiy and Sn. T. Atabayev), protective-adaptive mechanisms on exposure to low doses of pesticides (Ye. I. Spynu), toxicology of some herbicides (Ye. N. Burkatskaya), new data on organomercury compounds (I. M. Trakhtenberg et al.), DDT residues in potatoes (Sh. T. Atabayev), favorable and unfavorable features of adaptation to industrial poisons (Ye. I. Lyublina, N.A. Minkina, and M. L. Rylova), sensitivity of several liver function tests (I. P. Ulanova), new data on the embryotropic and gonadotropic action of manganese compounds (R. N. Manzhgaladze). "Zdorov'ye" publishing house in Kiev has issued a book on the proceedings of the conference entitled Gigiyena i toksikologiya pestitsidov i klinika otravleniy (The Hygiene and Toxicology of Pesticides and Clinical Aspects of Poisoning). [JPRS]

SUB CODE: 06 / SUBM DATE: none

Card 1/1

UDC: 613.63:632.95+615.777/.779-099](063)(47)"1965"

0915 1744

L 24364-66 EWT(l)/EWT(m)/ETC(f)/EWG(m)/T/EWP(t) IJP(c) RDW/JD/GG
ACC NR: AP 6008115 SOURCE CODE: UR/0139/66/000/001/0136/0141

AUTHORS: Shalimova, K. V.; Spynulesku, I.; Pirogova, N. V. 75
B

ORG: Moscow Power Engineering Institute (Moskovskiy energeticheskiy institut)

TITLE: Effect of the conditions under which thin films of zinc telluride are obtained on their electric properties 27

2 SOURCE: IVUZ. Fizika, no. 1, 1966, 136-141

TOPIC TAGS: zinc compound, telluride, resistivity, thermoelectric power, semiconducting film, temperature dependence, semiconductor carrier, stoichiometry, crystal structure

ABSTRACT: The authors report on the results of an investigation of the resistivity and thermoelectric power of several sublimated p-type cubic-modification zinc telluride films, ranging in thickness, from 10^{-6} to 10^{-4} cm. The investigation was motivated by the fact that the contradictions in the results obtained by various authors were 2

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ACC NR: AP6008115

apparently due to the differences in methods of preparation. The samples were prepared at different evaporator temperature, different distances between evaporator and substrate, and different degrees of vacuum in the working system. The initial powder was sublimated on glass and quartz substrates, which were either unheated (35C) or heated to 100, 160, 200, 250, 300, 350, 400, and 450C. The powder was sublimated in a vacuum of 3×10^{-5} and 3×10^{-3} mm Hg. The quantities measured were the specific resistivity, and the thermoelectric power. The sign of the carriers was also determined. The resistivity was measured as a function of the thickness of the sample, of the substrate heating temperature, and the evaporator temperature. In addition, the temperature dependence of the conductivity of the layers obtained under different conditions was measured. The results showed that the coefficient of the thermoelectric power and the resistivity of the films depend considerably on the method of preparation. This is due to changes in stoichiometry which occur under various conditions. The results also show that the type of crystal structure also has a pronounced effect, but heat treatment itself

Card

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L 24364-66

ACC NR: AP6008115

does not. The thermoelectric power increased when the films were heated in air (400 -- 440C), reaching in some cases a value 1000 -- 1200 μ V/deg. The electric conductivity had an irregular temperature variation, but in most samples it increased with increasing temperature. Orig. art. has: 6 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 16Jan64/ ORIG REF: 009/ OTH REF: 001

Card

3/3 *pla*